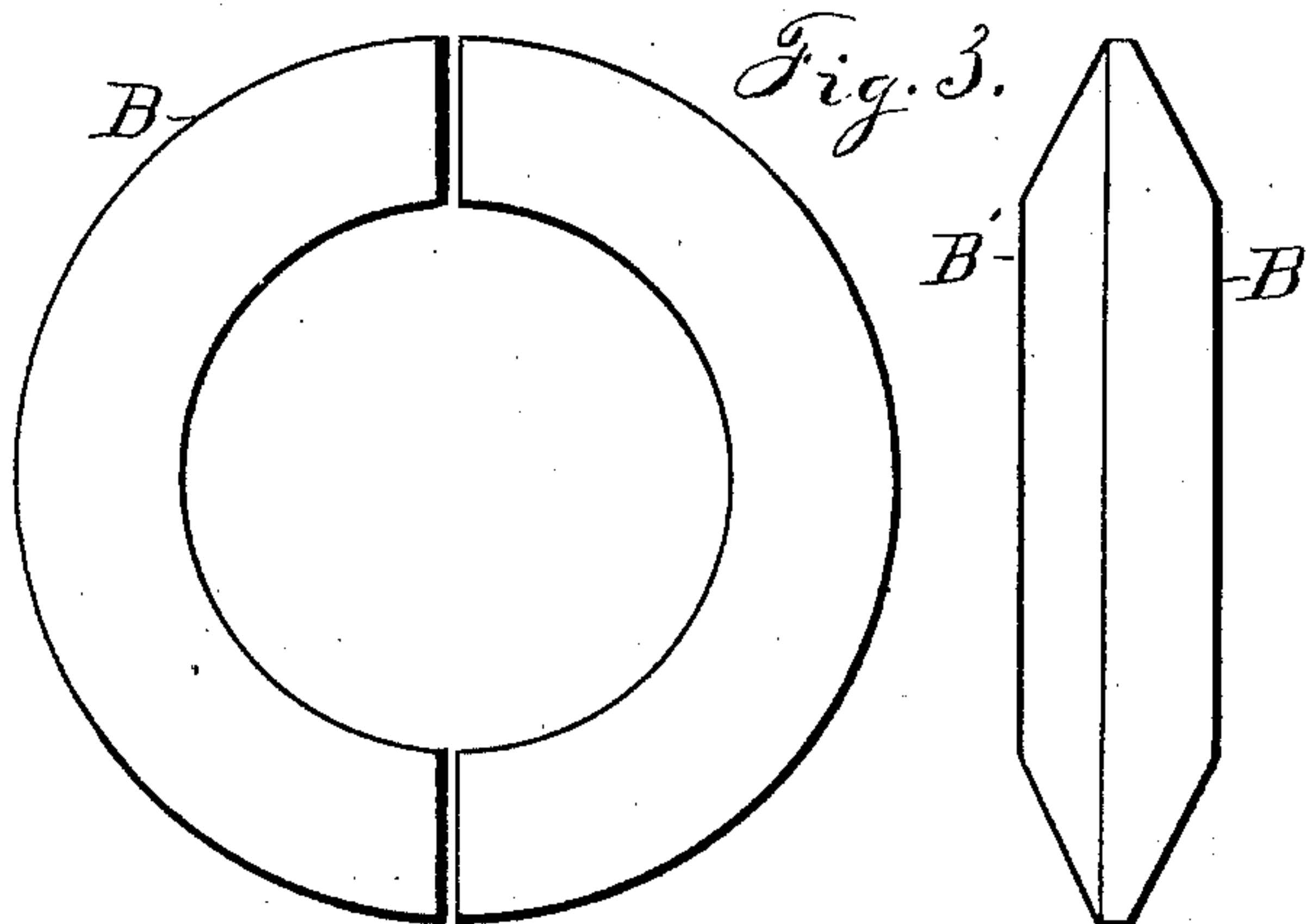
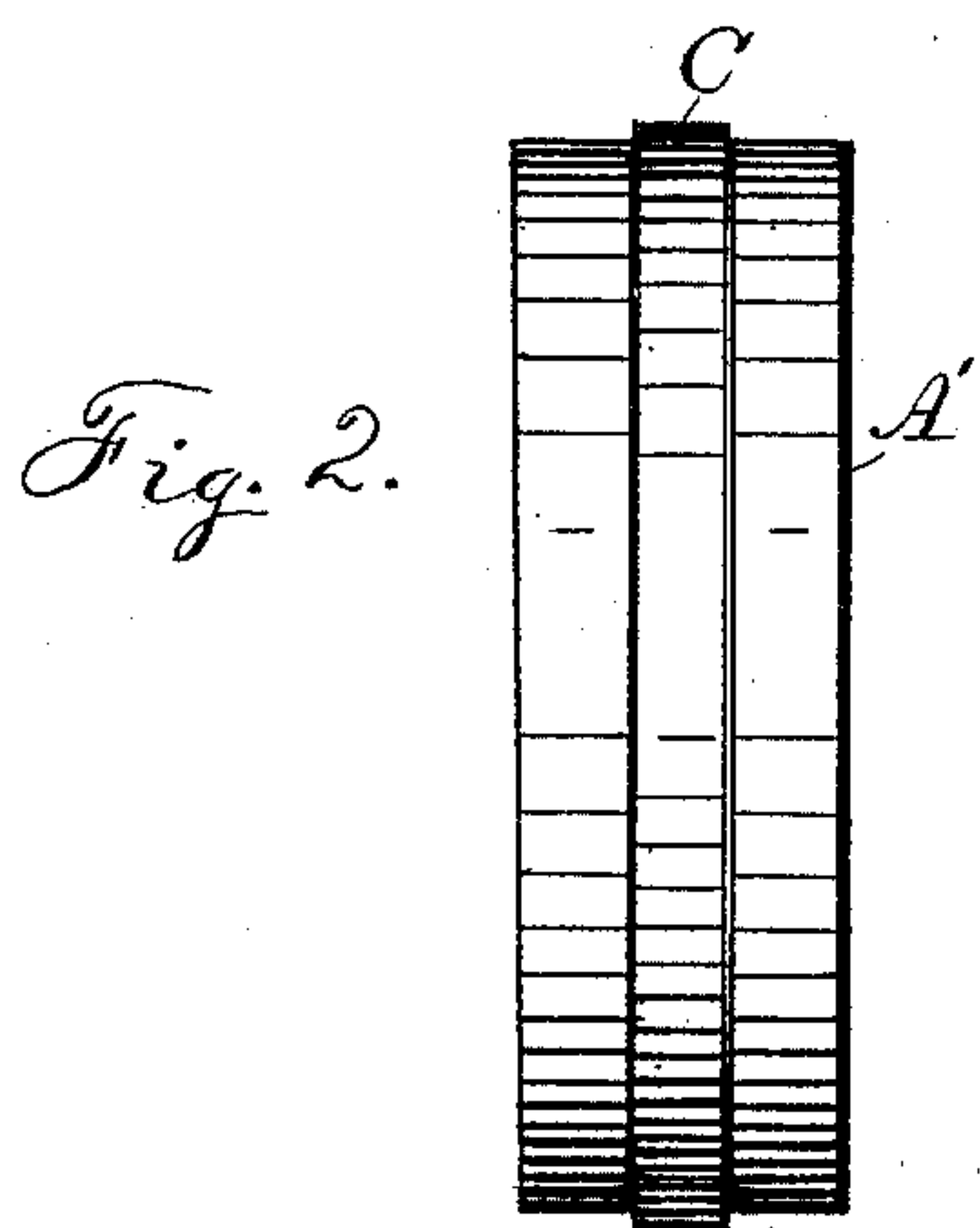
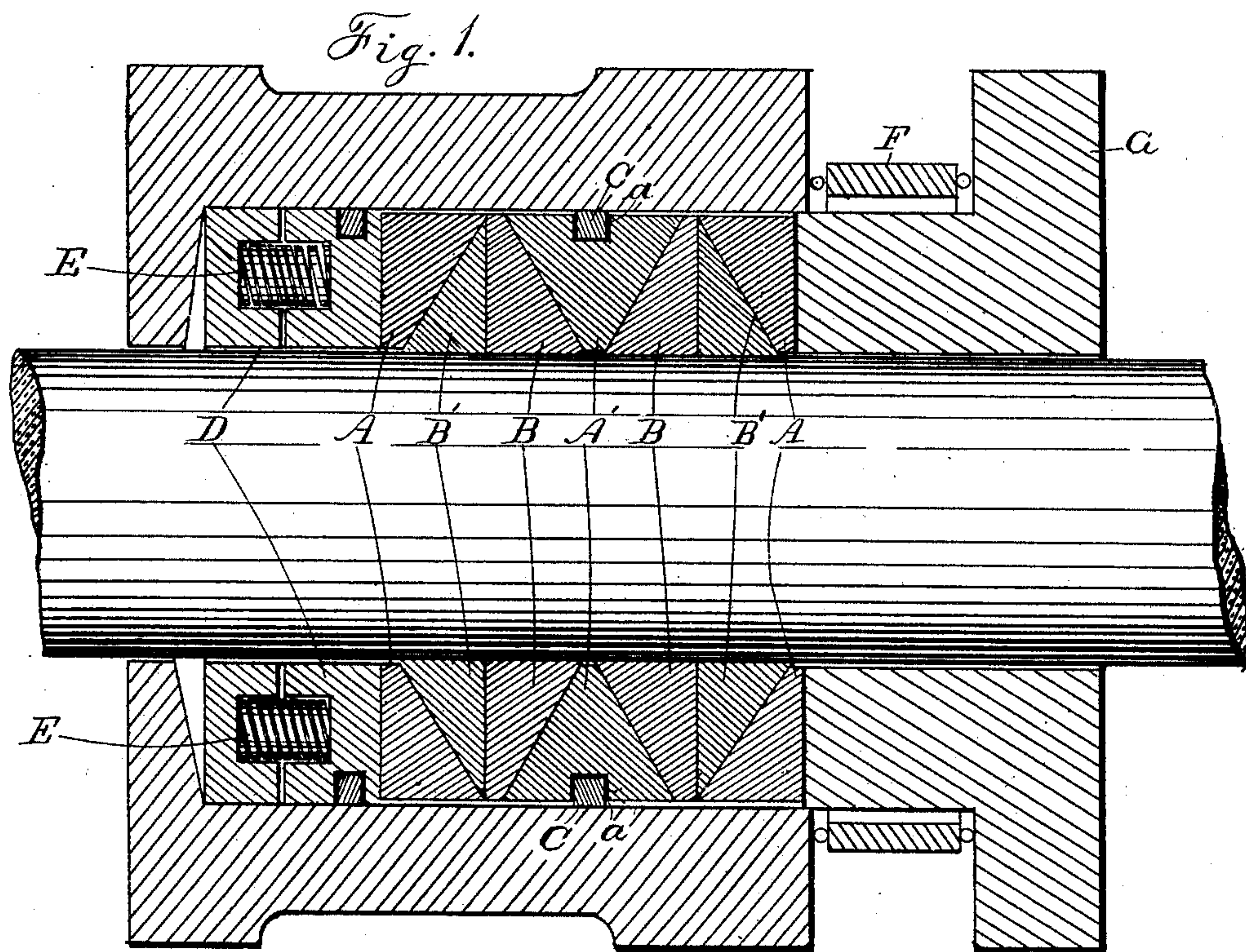


No. 711,086.

Patented Oct. 14, 1902.

R. P. VIVIAN.
PISTON ROD PACKING.
(Application filed Mar. 27, 1902.)

(No Model.)



Witnesses:
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Inventor:
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att'y

UNITED STATES PATENT OFFICE.

ROBERT P. VIVIAN, OF LOS ANGELES, CALIFORNIA.

PISTON-ROD PACKING.

SPECIFICATION forming part of Letters Patent No. 711,086, dated October 14, 1902.

Application filed March 27, 1902. Serial No. 100,297. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. VIVIAN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Piston-Rod Packing; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The special object of my invention is to improve the packing of piston-rods.

Figure 1 of the drawings is a longitudinal diametrical section of the parts about the piston-rod; Fig. 2, an edge view of a pressure-ring and snap-ring; Fig. 3, a side and edge view of a semicircular Babbitt ring in outline. Figs. 2 and 3 are reduced in size.

In the drawings, A A' represent the solid pressure-rings, and B B' the semicircular soft-metal Babbitt rings. The latter are intended to hug the piston-rod or valve-stem, so as to keep it steam-tight, and to be made to take up their own wear, as hereinafter described. The semicircular rings B are made in transverse section in the form of right-angled triangles, one of a pair being larger than the other, and the acute angles are respectively about thirty and sixty degrees. The larger ring B has its most acute angle cut off, while that of the smaller ring B' comes to a knife-edge, so as to prevent the steam from escaping around the rings. The shorter side of those that form the right angle serves as a bearing for the piston-rod or valve-stem, while the longer sides of the two triangles are brought into contact with each other. The

hypotenuse of each triangle comes in contact with corresponding sides of the pressure-rings A A' A, the ring A' being double or wedge-shaped. These solid pressure-rings cause the sectional Babbitt rings B B' to hug the piston-rod or valve-stem very closely and make them completely steam-tight.

C represents a Babbitt snap-ring fitting in the circular circumferential groove *a* of the pressure-ring A', so as to keep all the pressure-rings steam-tight without interfering with their adjustability.

D is a two-part casing which incloses the spiral springs E, which act on the pressure-rings to make the Babbitt rings take up their own wear and also hug the rod or valve-stem and keep them steam-tight.

F is the distance-piece, and G the gland, which are old and well known to the public. My invention has now been in practical use for more than a year and seems to work admirably.

Having thus described all that is necessary to a full understanding of my invention, what I claim as new and of my invention is—

In a packing for piston-rods or valve-stems, the solid-metal rings A A' A, the end ones being right-angled and the middle one V-shaped in cross-section, in combination with the soft-metal rings B B', each consisting of two half-circles, the ring B having its most acute angle cut off and the ring B' being knife-edged, all substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT P. VIVIAN.

Witnesses:

JOSEPH SHERWOOD,
WILLIAM BURG.